

AD-A037 995

DEFENSE SYSTEMS MANAGEMENT COLL FORT BELVOIR VA
AN EVALUATION OF THE NAVY'S SELECTED ACQUISITION REPORTS. (U)
NOV 76 V A SNIEGON

F/6 5/2

UNC_ASSIFIED

NL

| OF |
AD
A037995



END

DATE
FILMED
4-77

DEFENSE SYSTEMS MANAGEMENT COLLEGE



PROGRAM MANAGEMENT COURSE INDIVIDUAL STUDY PROGRAM

AN EVALUATION
OF THE
NAVY'S SELECTED ACQUISITION REPORTS

STUDY PROJECT REPORT
PMC 76-2

Virginia A. Sniegou
GS-12 DNC

FORT BELVOIR, VIRGINIA 22060

Copy available to DDC does not
permit fully legible reproduction

DISTRIBUTION STATEMENT A

Approved for public release;
Distribution Unlimited

DDC
RECEIVED
APR 11 1977
B

AD A 037995

AD No. _____
DDC FILE COPY

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER	2. GOVT ACCESSION NO.	3. RECIPIENT'S CATALOG NUMBER (7)
4. TITLE (and Subtitle) (6) AN EVALUATION OF THE NAVY'S SELECTED ACQUISITION REPORTS,		5. TYPE OF REPORT & PERIOD COVERED Student Study Project Report, 76-2
7. AUTHOR(s) (10) Virginia A. Sniegou		6. PERFORMING ORG. REPORT NUMBER
9. PERFORMING ORGANIZATION NAME AND ADDRESS DEFENSE SYSTEMS MANAGEMENT COLLEGE FT. BELVOIR, VA 22060		8. CONTRACT OR GRANT NUMBER(s)
11. CONTROLLING OFFICE NAME AND ADDRESS DEFENSE SYSTEMS MANAGEMENT COLLEGE FT. BELVOIR, VA 22060		10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS
14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office) (11) Nov 76 (12) 38p.		12. REPORT DATE 76-2
		13. NUMBER OF PAGES 35
		15. SECURITY CLASS. (of this report) UNCLASSIFIED
16. DISTRIBUTION STATEMENT (of this Report) UNLIMITED		15a. DECLASSIFICATION/DOWNGRADING SCHEDULE
17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)		
18. SUPPLEMENTARY NOTES SEE ATTACHED SHEET		
19. KEY WORDS (Continue on reverse side if necessary and identify by block number) SEE ATTACHED SHEET		
20. ABSTRACT (Continue on reverse side if necessary and identify by block number)		

DEFENSE SYSTEMS MANAGEMENT COLLEGE

STUDY TITLE:

AN EVALUATION OF THE NAVY'S SELECTED ACQUISITION REPORTS

STUDY PROJECT GOALS:

To examine and evaluate the effectiveness of the Navy's Selected Acquisition Reports, problems associated with their preparation, adequacy as a management tool and to ascertain in what manner the SARs might be improved.

STUDY REPORT ABSTRACT: *→ This study evaluates*

The purpose of the study is to evaluate the effectiveness of the SAR in terms of function, concept and usefulness by the various elements involved in its preparation and use.

A series of nine unstructured interview questions were posed to various individuals at the Project Manager, Secretary of the Navy and Secretary of Defense levels and to members of Congressional Staffs as well as the General Accounting Office. *The nine unstructured questions address* such areas as role, accuracy, costs, review levels, timeliness, usefulness and effectiveness, were key to the conduct of the study.

Study findings indicate

Significant findings of the study indicate that all concerned share the opinion that the SAR is a highly useful report in communicating program status to the DOD hierarchy and members of Congress. Problems involve incorrect interpretation of information, inconsistencies between written and verbal guidance, inclusion of data that does not always reflect the Project Manager's best estimate and increasing complexity of the SAR.

Insights as to the opinions and thoughts held by various elements in the preparation and use of the SAR are evident in the study.

PROJECT MANAGEMENT REPORT
DOD REPORTS TO CONGRESS

NAME, RANK, SERVICE

CLASS

DATE

Virginia A. Sniegou, GS-12 DNC

PNC 76-2

November 1976

AN EVALUATION OF THE NAVY'S SELECTED ACQUISITION REPORTS

Study Project Report
Individual Study Program

Defense Systems Management College
Program Management Course
Class 76-2

by
Virginia A. Sniegon
GS-12 DNC

November 1976

Study Project Advisor
Captain Paul B. Tuzo III, USN, DSMC DIM

ACCESSION for	
NTIS	White Section <input checked="" type="checkbox"/>
DDC	Buff Section <input type="checkbox"/>
UNANNOUNCED	<input type="checkbox"/>
JUSTIFICATION	
BY	
DISTRIBUTION/AVAILABILITY CODES	
Dist.	AVAIL. and/or SPECIAL
A	SECRET

This study project report represents the views, conclusions and recommendations of the author and does not necessarily reflect the official opinion of the Defense Systems Management College or the Department of Defense.

EXECUTIVE SUMMARY

Of the many documents generated by the Project Manager's Office, perhaps none is more important nor more controversial than the Selected Acquisition Report (SAR). This is the only report prepared by the Project Manager that is forwarded to Congress. As a result of this Congressional impact, the intervening layers of management attach great importance to its preparation and accuracy.

The SAR was initially conceived as an "in-house" Department of Defense document. It was later formalized and forwarded to Congress at the request of Senator Stennis. Today, the prime Congressional users of the SAR are the Armed Services and Appropriations Committees of both the House and the Senate. The Committees single out the SAR as a highly valuable management tool in monitoring the progress of major weapons systems. The SAR reflects summary reporting of technical, schedule, quantity and cost information concerning major defense systems. Currently, 44 SARs are submitted to Congress quarterly involving expenditures in the range of \$420,000,000,000.

The purpose of this study is to evaluate the effectiveness of the SAR in terms of function, concept and usefulness by the various elements involved in its preparation and use. A series of nine unstructured interview questions were posed to individuals at the Project Manager, Secretary of the Navy and Secretary of Defense levels and to members of Congressional Staffs as well as the General Accounting Office. The nine unstructured questions include coverage of role, accuracy, costs, review

levels, timeliness, usefulness and effectiveness.

The predominant opinion of all concerned is that the SAR is not only highly useful but is effective in communicating program status to the highest levels of the defense establishment and eventually to Congress. Problems, however, do exist because of incorrect interpretation of information due to unclear data, inconsistencies between written and verbal guidance, direction by reviewing officials to include financial data that does not always reflect the Project Manager's best estimate of his approved program, the tendency to "massage" the report at the review levels and the constantly increasing complexity of the SAR.

TABLE OF CONTENTS

EXECUTIVE SUMMARY	11
LIST OF ACRONYMS	v
LIST OF DEFINITIONS	vi
SECTION	
I. INTRODUCTION AND PURPOSE OF STUDY PROJECT	1
II. PURPOSE OF THE SAR	2
DEFINITION	2
OBJECTIVE AND SCOPE	2
III. HISTORY OF THE SAR	3
INITIATION AND APPLICATION	3
SUBMITTAL TO CONGRESS	3
IMPROVEMENT ESSENTIAL	4
GAO ACTION	4
IV. SAR FORMAT	5
V. RESEARCH METHODOLOGY	7
ELEMENTS INTERVIEWED	7
UNSTRUCTURED INTERVIEW QUESTIONS AND RELATED DISCUSSION . .	7
. WHAT IS/SHOULD BE THE ROLE OF THE SAR?	8
. DOES THE SAR REFLECT ACCURATE PROGRAM STATUS?	9
. IS THE SAR DATA FOR OUTYEARS ACCURATE?	11
. WHAT IS THE IMPACT OF ESCALATION ON SAR COST DATA? . . .	12
. ARE TOTAL WEAPON SYSTEMS COSTS INCLUDED IN THE SAR? . .	15
. ARE THERE TOO MANY SAR REVIEW LEVELS?	17
. IS THE SAR TIMELY?	18
. HOW USEFUL IS THE SAR TO:	
. Project Manager	20
. Higher Authority within SECNAV	20
. Office of the Secretary of Defense	21
. CONGRESS	21
. HOW DO NAVY PERSONNEL EVALUATE THE EFFECTIVENESS	
OF THE SAR	21
VI. FINDINGS, RECOMMENDATIONS AND IMPLICATIONS	25
FINDINGS	25
RECOMMENDATIONS	27
IMPLICATIONS	27
BIBLIOGRAPHY	29

LIST OF ACRONYMS

ASD(C) - Assistant Secretary of Defense (Comptroller)
ASD(I&L) - Assistant Secretary of Defense (Installations & Logistics)
ASN(FM) - Assistant Secretary of the Navy (Financial Management)
CNM - Chief of Naval Material
CNO - Chief of Naval Operations
CPR - Cost Performance Report
DCP - Decision Coordinating Paper
DDR&E - Director, Defense, Research and Engineering
DE - Development Estimate
DOD - Department of Defense
DP&E - Director, Planning and Evaluation
DSARC - Defense Systems Acquisition Review Council
FYDP - Five Year Defense Plan
GAO - General Accounting Office
NAVAIR - Naval Air Systems Command
NAVCOMPT - Navy Comptroller
O&S - Operation and Support
OSD - Office of the Secretary of Defense
PDM - Program Decision Memorandum
PE - Planning Estimate
POM - Program Objective Memorandum
PPBS - Planning, Programming and Budgeting System
RDT&E - Research, Development, Test and Evaluation
SAR - Selected Acquisition Report
SECDEF - Secretary of Defense
SECNAV - Secretary of the Navy

LIST OF DEFINITIONS

- DCP - Document by which the DSARC/DCP process is initiated.
- DSARC II - Critical milestone which determines whether a system will proceed into Full Scale Development.
- DE - The estimate of operational/technical characteristics, schedule and program acquisition costs (development and procurement) when approval is given by the Secretary of Defense for the program to move into Full Scale Development.
- FYDP - Summarized approved five-year program of all Military Departments and Defense Agencies.
- PE - The estimate of operational/technical characteristics, schedule and program acquisition costs (development and procurement) when approval is given by the Secretary of Defense for program initiation.
- POM - The vehicle by which SECNAV proposes revisions to the approved program in the FYDP.

SECTION I

INTRODUCTION AND PURPOSE OF STUDY PROJECT

The ultimate objective of developing and acquiring major weapon systems is to improve the Department of Defense's capability to accomplish a particular mission or counter a specific threat. The past decade has seen the acquisition of these major weapons systems characterized by cost growth in almost every major program. Current austere defense budgets coupled with high inflation and spiralling weapons systems costs have created a great deal of pressure at all levels of acquisition management to keep down weapons systems cost growth. Congress has found it politically expedient to attack the management of defense systems. These attacks serve to intensify the pressure at every level of management within the Department of Defense (DOD). Since the early 1960s, a series of program review, budget and cost information systems, which were designed to improve the weapons systems acquisition process and control costs, have been instituted. They include the Decision Coordinating Paper (DCP), the Planning, Programming and Budgeting System (PPBS) and the Selected Acquisition Report (SAR). These systems have been effective in providing information to assist DOD personnel and Congress in improving the acquisition process.

The purpose of this study project is to examine and evaluate the effectiveness of one of these three systems, the SAR, from the Navy's point of view. Data was collected by unstructured interviews. My interview area of coverage, principal findings, recommendations and implications are stated in the contents of this study project report.

SECTION II

PURPOSE OF THE SAR

DEFINITION

Selected Acquisition Reports (SARs) are standard, comprehensive, summary status reports on major defense systems for management within DOD (1:1).¹ These reports are used at the highest levels of management within DOD and are the basis for reports to Congress and other government agencies including the General Accounting Office (GAO).

OBJECTIVE AND SCOPE

In broad terms, the objective of the SAR is to show project status and progress as a function of time, and in so doing to provide some measure of the effectiveness of project management. The SARs are required for programs designated as major by the Secretary of Defense. They will usually be limited to those major defense systems which are estimated in the Five Year Defense Plan (FYDP) to require:

- 1) A total cumulative financing for Research, Development, Test and Evaluation in excess of \$50,000,000 or
- 2) Cumulative procurement funding in excess of \$200,000,000 (1:1).

A major weapon system normally becomes a SAR after approval of DSARC II. Termination of SAR reporting will normally be considered when production of the system is 90% complete.

¹This notation will be used throughout the report for sources of quotations and major references. The first number is the source listed in the Bibliography; the second number when used is the page in the reference.

SECTION III

HISTORY OF THE SAR

INITIATION AND APPLICATION

The SAR originally was initiated by Robert C. Moot, Assistant Secretary of Defense (Comptroller) (ASD(C)), in February 1968, with eight systems to keep his office informed. The F-111, POSEIDON and PHOENIX were three of those systems. In January 1969, the F-14 was substituted for the F-111. In April 1969, application of the SAR was broadened considerably. At that time, David Packard, Deputy Secretary of Defense, expanded Navy's reporting requirement by 15 additional systems (2).

SUBMITTAL TO CONGRESS

Shortly after Mr. Packard's SAR expansion, a member on Senator Stennis' Armed Services Committee became aware of the reports and worked with Mr. Moot to obtain the reports for Senator Stennis. The initial reports were summary status reports which did not include budget data. Senator Stennis wanted and later received budget data, but he was also desirous of receiving cost data which did not appear in the reports. On December 11, 1969, Senator Stennis wrote a letter to David Packard requesting that the Committee on Armed Services be provided with data that would reflect the current status of the weapons systems and would allow the Committee to follow the dollars that require authorization.

IMPROVEMENT ESSENTIAL

The quality of the first SARs was not satisfactory. The first SAR reports reflected many variations in presenting costs and numerous instances of inadequately detailed and unclear cost variance analyses. All of the foregoing reflected adversely on DOD management. Improvement in the timeliness, consistency and quality of this increasingly important report was essential. It was clear that this report was becoming the most significant base for judging project status and progress, both within and out of DOD.

GAO ACTION

Since the inception of the SAR, the GAO has worked with Congressional Committees and DOD making considerable improvements to the system. The primary Congressional users of the SAR are the Senate and House Armed Services and Appropriations Committees. The Committees are most concerned with acquiring adequate information on the progress of major weapons systems. The Committees have stated that the SAR is a valuable management tool in monitoring progress and have, therefore, taken an interest in improvements to the SAR.

At the request of Senator Stennis, the GAO made its first report on the SAR in February 1970 and has reviewed the SAR on an annual basis for the last seven years. The first revision to the SAR DOD Instruction 7000.3 was made as a result of the second GAO review in December 1970. The second revision was issued in 1975. This instruction, dated September 23, 1975, remains in effect.

SECTION IV

SAR FORMAT

Since the SAR is designed to provide information concerning selected weapon systems acquisitions to all levels of management within DOD and Congress, the implementing DOD Instruction 7000.3 is very definitive. In many instances, specific instructions are given concerning source data that should be used. SARs are prepared quarterly in accordance with a standard format that is approximately 13 pages in length. Each page is set up to give a snapshot visualization of how things are progressing. Selected technical, schedule, quantity and cost data are provided including program highlights and variance analyses.

Individual reports for all SAR programs are prepared by the Project Manager. There is tremendous interplay, review and coordination at numerous levels before being released by the Office of the Secretary of Defense (OSD) to the four committees of Congress--Senate Armed Services Committee, House Armed Services Committee, Senate Appropriations Committee and House Appropriations Committee.

As of September 30, 1976, SARs were required and sent to Congress for 44 major systems acquisition programs within DOD. Of this total, 24 SARs were for Navy programs. Responsibility for these 24 Navy SARs is: Naval Air Systems Command - 13, Naval Electronics Systems Command - 1 and Naval Sea Systems Command - 10. The Army submitted 11 SARs while the Air Force was responsible for nine SARs. Costs per total weapon system for the Navy programs ranged from \$423,000,000 to \$16,000,000,000 for an overall program cost of more than \$85,000,000,000 for the 24 Navy SARs.

Seven other programs submitted SARs to the DOD level only. Once these seven programs are removed from SAR reporting, all future SARs will be released to Congress (3).

SECTION V

RESEARCH METHODOLOGY

ELEMENTS INTERVIEWED

In order to examine and evaluate the SAR's effectiveness, I interviewed originators, reviewers and users of the SAR. Project Managers and Staff personnel who originate the SARs for the A-7, F-18, P-3C, S-3, E-2C and PHOENIX weapons systems assisted in the research by participating in unstructured interviews. In addition, the following review organizations participated in the research: Chief of Naval Material (CNM), Navy Comptroller (NAVCOMPT), Secretary of the Navy (SECNAV), Secretary of Defense (SECDEF) and GAO. Lastly, Congressional Staffers from the Senate Armed Services Committee, Senate Budget Committee and House Appropriations Committee contributed to the research by volunteering information and answering unstructured interview questions.

UNSTRUCTURED INTERVIEW QUESTIONS AND RELATED DISCUSSION

This section of the report pertains to nine selected unstructured interview questions and discussions relating to these questions which reflect function, concept and usefulness of the SAR. These questions are as follow:

- What is/should be the role of the SAR?
- Does the SAR reflect accurate program status?
- Is the SAR data for outyears accurate?
- What is the impact of escalation on SAR cost data?
- Are total weapon systems costs included in the SAR?

- Are there too many SAR review levels?
- Is the SAR timely?
- How useful is the SAR to:
 - . Project Manager
 - . Higher authority within SECNAV
 - . Office of the Secretary of Defense
 - . Congress?
- How do Navy personnel evaluate the effectiveness of the SAR?

Each question will be addressed separately here in the sequence listed above.

WHAT IS/SHOULD BE THE ROLE OF THE SAR?

DOD Instruction 7000.3 states that the SARs are:

...standard, comprehensive, summary status reports on major defense systems for management within the Department of Defense (1:1).

When David Packard was Deputy Secretary of Defense, he wrote a letter (4) to Senator Stennis which stated in part:

Our objective has been to develop a report which fairly describes to key executives of the DOD and Congress the status of our acquisitions.

Since the initiation of the SAR, the Project Management offices and all appropriations sponsors and other higher level staffers are much better versed on the financial status of the programs. The financial, technical and schedule information in the SAR are all required to provide and retain this improved state of awareness.

Basically, the Project Managers feel the objective of the SAR is excellent provided it presents meaningful information in a consistent and well-defined manner. At times there is evidence that the SAR is not

accomplishing its objective. For example, recipients frequently ask Project Managers to explain information reported. In addition, the constantly increasing complexity of the SAR, the inconsistencies between written and verbal guidance and direction by reviewing officials to include financial data that does not always reflect the Project Manager's best estimate of his approved program all contribute to the inability of the user to understand the data presented. It is the belief of several Project Managers and their SAR coordinators that factors contributing to this problem should be examined and alleviated in order to return the SAR to its original intent.

On the other hand, the Congressional Staffers hold the opinion that the SAR should be a document that would highlight the problem areas in the program for the benefit of Congress. DOD, ever mindful of budget cuts, is not making the SAR that kind of document. The biggest pitfall is that records reflect many instances of funding reductions by Congress; therefore, the Project Manager usually acts in a manner which provides the minimum number of problem areas to Congress during discussions and SAR status reporting.

DOES THE SAR REFLECT ACCURATE PROGRAM STATUS?

The majority of the interviewees were questioned as to their impression of whether the SAR presents the true status of the program. The spectrum of answers varied from "extremely accurate" to "somewhat inaccurate" in presenting the true status. The bias of user/originator was evident--the user generally believing the SAR to be inaccurate and the originator calling it accurate.

One Senate Armed Services Committee member whom I interviewed feels the SAR is "watered down". He stated that problem areas should be included in the report since the SAR often does not lend visibility early enough. He believes the Project Manager, up to a point, tells them (Congress) what he wants them to know. An OSD interviewee alluded to this also. I do not consider this to be a major weakness in the system because it gives the Project Manager incentive and opportunity to exercise strong control over the potential problem. In this dynamic and ever changing acquisition environment many problems can be solved without the need of reporting them in the SAR. If the Project Manager included every problem and potential problem in the SAR, the results would far exceed the page limit imposed on the SAR. It would cause a significant increase in the amount of time the Project Manager spends in "justifying his existence" because of increased program reviews, briefings and correspondence.

This Senate Staffer further pointed out that the Project Manager can carry his optimism only so far because of the effectiveness of the Congressional Committees in obtaining information on program status from other sources; therefore, the Project Manager must be ready to justify his status during annual hearings. He can present his program on the "optimistic" side but must be prepared to justify his optimism.

The majority of the SAR originators and reviewers interviewed consider the SARs to be accurate. This belief is based on the extensive review procedure for program status, not only the SAR review but DSARC (Defense Systems Acquisition Review Council), the POM (Program Objective Memorandum) and periodic program status reviews. These reviews are keyed to revealing

problem areas so that, while the Project Manager might be able to cover up cost growth for a time, they eventually will be disclosed.

IS THE SAR DATA FOR OUTYEARS ACCURATE?

Generally, it is felt that outyear figures based on numbers of aircraft and missiles are realistic and rather accurate except in the area of advanced procurement. In the advanced procurement area, the numbers are juggled around to make them work. The outyear figures are totaled, then escalated by a percentage rate given the Project Manager by the Navy Comptroller. Therefore, there are restrictions or limitations on what outyear figures will be. Based on this system, the outyear data is as accurate as known, for who can forecast the rate of escalation.

Normally the Chief of Naval Operations (CNO) establishes the overall requirement for operation of a Navy aircraft. If added capability is needed, the Project Manager is responsible for developing this added capability. However, the Project Manager may be way off in left field because there are too many unknowns. The Project Manager might estimate a cost of \$25,000,000 which becomes the base year figure when the actual cost could be twice as much. The Project Manager is locked into the base year figure which becomes an overrun as soon as it changes as far as Congress is concerned. When Project Managers are projecting figures 10 years into the future and are estimating now, they do not consider such long range estimates overruns; however, Congress does.

Two or three Project Managers mentioned that engineers have a tendency to under-estimate costs. They believe that the engineers feel the Project Manager can add a new capability to an aircraft for much less money than

the actual cost.

Basically, it is felt a better price-out system is needed. The SAR is one of the few places where this area shows up because it is talking to the total program. Since engineering cost estimates are important in determining the cost baseline for the program, guidance concerning engineering cost estimates is needed. Usually, very little change is made in price-out figures. However, price-out changes depend on what the figures are for and whether they are worth changing. The Project Manager is not reluctant to make changes in price-out figures providing he is able to, but he is often fighting costs. Navy has funding constraints so the Project Manager must live within those constraints.

Overall, it is believed that the SAR cost data are quite accurate for the particular quarter for which they are submitted, but the Project Managers find it extremely difficult to estimate out for five or six or more years since escalation costs have been increasing from year to year.

WHAT IS THE IMPACT OF ESCALATION ON SAR COST DATA?

My interviews reflected that one of the major problems encountered by a Project Manager in his relations with Congress is the validity of his cost data. The cost baseline for the SAR is either the Planning Estimate (PE) or the Development Estimate (DE) depending on the stage of procurement. Independent cost estimates are also conducted for the Project Manager. The crucial point, however, is not the cost itself (which may or may not be subject to speculation) but what happens to the cost over a period of time when ASD(C) price escalation indices (5) are applied. The annual percentage rates according to the ASD(C) price escalation

indices (Table 1, next page) vary from 4.0% to 6.1% for Research, Development, Test and Evaluation (RDT&E) and Procurement. Such indices do not necessarily reflect the "real world" economic escalation of perhaps 8% or 9%.

Consider the problem that a Project Manager might have if he (after detailed cost estimating) receives an estimate for \$400,000,000 during 1977 for a weapon system to be deployed in 1980. Given the ASD(C) price indices, he would escalate the costs to 1980 at 6.1% for 1977, 6.1% for 1978, 5.4% for 1979 and 4.4% for 1980. Now if in fact the true escalation were 8% a year, the costs would grow under each approach as follow:

Year	Using ASD(C) Prices Indices		Using "Real World" Economic Escalation Factors	
	Factor	Cost (Millions)	Factor	Cost (Millions)
Beginning 1977		400		400
End of 1977	6.1%	424.4	8%	432
Beginning 1978		424.4		432
End of 1978	6.1%	450.3	8%	466.6
Beginning 1979		450.3		466.6
End of 1979	5.4%	474.6	8%	503.9
Beginning 1980		474.6		503.9
End of 1980	4.4%	495.5	8%	544.2

The Project Manager knows that as of September 30, 1976, he must use the ASD(C) price indices provided to him in the preparation of program acquisition cost estimates. Therefore, he reflects as his "best estimate" for the DCP and SAR, the amount \$495.5 million for his program in 1980. As the year 1980 arrives, he is called before Congress to find out why the program is in financial difficulty. Congress wants to know why the program is costing \$544.2 million "all of a sudden" when they were told back in 1977 by that Project Manager that he projected a cost of \$495.5 million.

PRICE ESCALATION INDICES
OASD (COMPTROLLER)

<u>Fiscal Year</u>	<u>Procurement</u>	<u>RDT&E</u>	<u>Military Construction Family Housing</u>	<u>Shipbuilding</u>
1976	93.3	93.3	92.9	88.7
1977	96.3	96.3	96.4	94.5
1977	100.0	100.0	100.0	100.0
1978	106.0	106.1	106.0	108.4
1979	111.7	111.8	111.8	115.6
1980	116.8	116.7	117.4	123.0
1981	121.4	121.3	123.3	130.9
1982	126.3	126.1	129.5	139.3
Each Year Thereafter	4.0%	4.0%	5.0%	6.4%

ANNUAL RATES (Percentages)

1977*	3.2(5.1)	3.2(5.1)	3.8(6.0)	6.5(10.5)
1977*	3.8(6.1)	3.8(6.1)	3.7(6.0)	5.8 (9.3)
1978	6.0	6.1	6.0	8.4
1979	5.4	5.4	5.5	6.6
1980	4.5	4.4	5.0	6.4
1981	4.0	4.0	5.0	6.4
1982	4.0	4.0	5.0	6.4

*Rate shown applies to transition period; annual rate is shown in parenthesis.

NOTE: Shipbuilding indices are unchanged from those issued July 31, 1975.

A major recent factor contributing to the complexity of the SAR is the effort directed by SECNAV Instruction 7700.5C (6) to segregate escalation by year on an "economic" and "program change related" basis. The picture is further complicated by the requirement to show escalation "from year of change approval" as a subset of "program change related" escalation.

Interviews revealed that the Project Managers agree that escalation is a fact of life and must be addressed. However, the detailed escalation breakdown requested is not available to some of the older programs, e.g., A-7, P-3, E-2, PHOENIX. These programs date from the 1960s. The emphasis on compiling and reporting on escalation was not specifically addressed until the early 1970s. Consequently, older programs were not required to segregate escalation data in the detail that is requested in the SAR. It has been stated during quarterly SAR reviews that reliable data in the degree required cannot be furnished. However, reviewing officials continue to request that the data be furnished anyway. Some Project Managers have resisted this requirement because the data submitted would be unsupportable.

ARE TOTAL WEAPON SYSTEMS COSTS INCLUDED IN THE SAR?

All those whom I interviewed agreed that current SARs do not reflect total weapon systems costs. However, under the ground rules of the instruction, all costs the Project Managers are required to report are included. GAO investigates areas which they believe the Project Manager should report. But, if it is not covered in the instruction, the costs are not included by the Project Manager. For example, GAO made a

recommendation (7:22) that all costs which are expected to be expended for the benefit of the development and procurement of a weapon system should be included in the SAR. The DOD position is as follows:

...this recommendation deals principally with the inclusion of RDT&E costs for associated Defense armament in those SARs which now exclude them. The DOD position is that such development costs are not included in the SAR program cost, since by definition and policy, they are not part of the approved program acquisition cost of the weapon system for purposes of the budget, FYDP, DCP and any other DOD program documents dealing with system acquisition. The basic criteria for determining whether or not to include armament research in weapon system cost is the uniqueness of the armament to that system. When it is finally determined that the associated armament is in fact unique to the weapon system, all costs for that armament, RDT&E as well as procurement, will be added to the SAR program cost--retroactively as required (7:22).

During interview discussions, I discovered there are various costs that cannot be specifically tied to an aircraft because there is no way one can break out such costs. One example I am aware of is modification and replenishment spares. For a while, at the request of Senator Stennis, modification and replenishment spares were broken out in the SAR, but these figures were guesstimates since they could not be tied in accurately.

Programming and accounting records do not break out modification and replenishment spares to specific aircraft programs. For example, it would be impossible to provide accurate prior year figures related directly to a particular aircraft program such as the A-7E since many modifications involve equipments that are common to more than one aircraft program. Navy spares are bought by the Aviation Supply Office in accordance with the stock level. If the computer indicates a purchase is required, they buy. Therefore, GAO could not pinpoint spares costs, but still takes exception to the fact that these costs have been deleted from the report.

ARE THERE TOO MANY SAR REVIEW LEVELS?

As stated earlier, SARs originate with the Project Manager. They are then forwarded through various command and headquarter channels with military departments and finally to OSD. Each level has a review function, the value of which has been of concern to ASD(C). In a recent study of SAR processing, the Comptroller's staff determined there was a tendency toward too many reviews at too many levels (7:16).

During my interviews, I discovered that occasionally additions are made to the SAR at the intermediate levels without full concurrence and coordination with the Project Manager. Although the ASD(C) staff stated that all changes were coordinated with Navy reviewers and the cognizant Project Manager, a few project offices reported that this was not always the case and that changes had been made without the Project Manager's knowledge. At times this has led to embarrassment. However, the Project Managers and review level personnel whom I interviewed stated that the review system should be retained as is. Their reasoning centered on report standardization, the Review Committees catching errors and matching the budget data with the FYDP, the POM and the PDM (Program Decision Memorandum). Final approval of the SAR, upon completion of the review process, rests with the Deputy Secretary of Defense.

The DOD position is that the present review levels are required and should be retained. DOD stated policy (7:16) is that the Project Manager is responsible for preparing the SAR and is accountable for its accuracy and completeness. Since the Project Manager is not always aware at the time of SAR preparation of the status of changes to his program being considered or made at higher organizational levels, the review process can

provide full disclosure of the status of each program -- cost, schedule, performance, pending decisions and capabilities. To delete any of the review levels would deny the service secretaries and the Secretary of Defense their responsibility for reviewing the SAR before it is submitted to Congress.

IS THE SAR TIMELY?

The timeliness of the SAR is directly related to the review process. Until a year ago, after much pressure from Congress, the review process was quite lengthy which resulted in "history" status reports to Congress vice "current" status reports. When Honorable Mahon chaired the House Appropriations Committee, an excerpt from a House Committee Report stated it was necessary to prepare for and conduct procurement hearings as early as March based on prior year September SARs, and during those hearings, Service witnesses frequently answered Committee questions by referring to the 31 December SARs which the Committee had not yet received.

In October 1975, the SAR became Public Law (8:9) stating all future SARs shall be submitted to Congress within 30 days after the end of each quarter. If the reports received are preliminary, then final reports are to be submitted to Congress within 45 days after the end of each quarter. Upon talking with Congressional Staffers, I was informed the SAR is now timely. They usually receive the majority of the reports within 30 days following the end of the quarter.

The review levels have not changed but the review process has been speeded up to make the SARs timely. The motivation of the Navy SAR implementers, particularly those within the Naval Air Systems Command

(NAVAIR) is high at present. The next few sentences reflect NAVAIR's support in keeping the SARs timely. Following the end of a quarter, the SAR coordinators in NAVAIR devote two weeks of continuous effort to updating the SAR. By the 14th day, the SAR is ready for distribution to the SAR coordinating office. This office reviews the 13 NAVAIR SARs as soon as received and promptly delivers the required number of copies to NAVCOMPT within a few hours, forwarding additional copies to CNM for review. Within a day or two, NAVCOMPT schedules a review with the Project Manager, his pertinent staffers, the NAVAIR coordinating office, CNM and CNO sponsors.

This review takes from one to two hours. During this time all "sleeves are rolled up" and each page of the SAR is discussed and "argued" in detail until an agreeable solution is reached. Discussions center around insignificant areas such as proper phrasing to pertinent data reflecting thresholds breached and impact of escalation on cost figures. I have been present for several of the Navy reviews including the initial F-18 review in mid April 1976. The first review of a major weapon system generally takes longer than the two hour allotted.

By the end of the third week the SARs have been changed, approved and are forwarded to ASD(C) for review. ASD(C) in turn distributes the Navy SARs to the Director, Defense Research and Engineering (DDR&E), Assistant Secretary of Defense (Installations and Logistics) (ASD(I&L)), and Director, Planning and Evaluation (DP&E) for review. If one of the offices disagrees with information in the SAR, an "issue paper" is submitted to ASD(C) who is responsible for coordinating and staffing the correction or

change. The SAR is then signed by the Deputy Secretary of Defense and forwarded to Congress. The problem of reviewing SARs at the OSD level is compounded since each reviewer must review not only all the Navy SARs, but also the Air Force and Army SARs in approximately one week.

By prioritizing the SAR review and working longer than normal days, the SARs are being released on time to Congress for the first time since their inception.

HOW USEFUL IS THE SAR TO: PROJECT MANAGER -- HIGHER AUTHORITY WITHIN SECNAV -- OFFICE OF THE SECRETARY OF DEFENSE -- CONGRESS?

PROJECT MANAGER - The Project Managers and Project Manager staffers interviewed feel that the SAR is of little use to the Project Manager except for the intangible benefit to keep the program current. The Project Manager has certain program statistical breakouts he would not normally have if it were not for the SAR. It is a good historical record. At the end of each quarter the Project Manager can really see where he is program-wise. The usefulness of the SAR to the Project Manager is that it serves as his communication channel with the Congress on his major acquisition program.

HIGHER AUTHORITY WITHIN SECNAV - The general feeling within SECNAV is that the SAR is very useful to higher authority because it has all the program data compiled into each report. All the thresholds are there and reported on. The SAR gives a good overall view of budget data and program status which SECNAV finds very useful for budget hearings. By referring to the SAR, SECNAV is able to match and verify budget data with the FYDP, the POM and the PDM.

OFFICE OF THE SECRETARY OF DEFENSE - OSD SAR reviewers feel the SAR gives a great deal of visibility to the program. This often results in management decisions being made that would not otherwise be made, being good or bad. It is a management tool that is utilized by the higher levels of management within DOD. Also, OSD often uses the SAR as a vehicle to answer Congressional inquiries.

CONGRESS - Senator Stennis, in a recent Senate Report, stated "The SARs have proved extremely beneficial in assisting the Congress to maintain an oversight of the programs throughout the year." The Congressional Staffers whom I interviewed stated that the SAR is a valuable management tool to monitor progress of major acquisition programs within DOD.

Of particular concern to Congress are the new systems entering the early phases of the acquisition process and for which Congress will be asked to appropriate large sums of money in later years. Although cost information is of paramount interest to Congress, those Congressional Staffers whom I interviewed stated that Congress also is concerned about meeting scheduled milestones and the accomplishment of technical performance compared with what was originally projected. The SAR provides Congress with some measure as to whether the program is on schedule and within cost.

HOW DO NAVY PERSONNEL EVALUATE THE EFFECTIVENESS OF THE SAR?

As expected, the answers varied and ranged from "a necessary evil" to "a good comprehensive document." When new, the SAR like any other report, no matter what its purpose, was looked upon as a burden

only; it was some time before its quality improved. Today, the Navy considers the SAR beneficial and uses it as a key document within DOD and Congress.

In order to reflect an overall Navy evaluation of the effectiveness of the SAR, I shall elaborate on a few comments and opinions that were discussed during the interviews and while talking with other knowledgeable people. It is difficult to comprehend all the data that is in a SAR, so the Project Manager is often getting questions. Such intrusions are time consuming and often keep the Project Manager from other important tasks. But the fact that a little knowledge can sometimes be dangerous cannot be ignored. Before the SAR, there was never a document that showed the total program and the total cost figures. This is good but there are limitations and restrictions since the Project Manager does not always tell DOD everything about the program.

Then, there is always the problem of Congress interpreting the report differently from the way it should be interpreted. Occasionally the Project Manager is unable to get through to Congress. Congressmen can be very "hard nosed." The problem seems to multiply with Congressional Staffers. Also, Congress does not always agree with the contents of the report, but they usually manage to see what they want to see.

The Project Managers are directed to follow the instructions and prescribed format very closely. Achieving a reasonable balance between standardization and the individual program dynamic peculiarities is a problem since all SARs cannot be squeezed easily into one prescribed format. In programs where the SAR requires changes every quarter, it is

felt that much of the effectiveness is lost. One reason for so many quarterly changes is the FYDP. The purpose of the FYDP is to stabilize costs, but the FYDP changes too frequently. This is unsatisfactory when the Project Manager does not know from one year to the next what can be bought for his program.

A big burden in responding to quarterly changes is that it takes a while to price out a program. Consultation with many contact points is required. Often when a program changes, the Project Manager is pressured to make changes immediately, so he is forced to submit off-the-cuff estimates.

A recent factor adding to the complexity of the SAR is the requirement set forth by ASD(C) memorandum (9) to submit supplemental Cost Performance Report (CPR) data beginning with the 30 September 1976 SAR. This information is for use within the OSD environment only and will not be forwarded to Congress. Guidance for the CPR data states that data in the supplemental should be consistent with corresponding data in the SAR. Because of a time lag between CPR reports and the SAR due date, timely coordination of data in the two reports will be difficult. Additionally, variance analysis pages must be submitted for the CPRs. Preparation of these pages in a concise acceptable SAR format will create more questions during the SAR reviews. If CPR data is desired for use within OSD, Project Managers and their SAR coordinators are of the opinion that it should be submitted separate from the SAR.

There are those who feel that because of the multiple SECNAV guidelines and constraints imposed on the Project Manager for preparation of

the SAR, it no longer fully represents the Project Manager's report on his program. For example, when preparing the 30 June 1976 SAR for CONDOR, the Project Manager was constrained to report a hybrid program comprised of the January 1976 President's Budget for FY 1978, the DSARC IIIB approved program for FY 1979-80 and some small amounts of funding identified in an unapproved DCP (10). Incidental to this was the fact that the requirement to report the CONDOR program in this manner was not fully explained to the Project Manager until well after the submittal of the SAR. Thus, several additional hours of preparation were required on this SAR.

Often, the Project Manager has to report on areas in which he lacks control. He is dependent on functional areas for inputs such as in the spares area and even then he sometimes changes the figures. When GAO conducts its review, the Project Manager cannot always defend the figures.

No one in the Navy appears to be anti-SAR. Generally, it is felt the basic idea of the SAR is excellent, provided it accomplishes its purpose by providing meaningful information in a consistent and well defined manner. All those whom I interviewed and questioned in general (approximately 30) hold the opinion that Congress has the right to know anything they want at any level since they have to make the decisions to come up with the money. It is Congress' job to look for soft spots in the programs. On the other hand, the Navy's purpose for existence is to support the Fleet. The Navy will continue to support the Fleet by defending its programs, and as long as the SAR remains a key document within DOD and Congress, responsible individuals will strive to make the SAR a useful and effective document that will be representative of the "true" Project Manager's report to Congress.

SECTION VI

FINDINGS, RECOMMENDATIONS AND IMPLICATIONS

FINDINGS

The results of the research have shown that in general the Navy considers the SAR justified with reporting improvements desired for major defense systems within DOD. Existing problems include the incorrect interpretation of information due to unclear data, inconsistencies between written and verbal guidance, direction by reviewing officials to include financial data that does not always reflect the Project Manager's best estimate of his approved program, the tendency to change the report at the review levels and the constantly increasing complexity of the SAR. Overall, the SAR has changed considerably since its inception. It has increased in complexity and now includes cost, schedule and performance data plus a variance analysis and contractor information.

During interviews with Congressional Staffers and while attending a Congressional briefing in early September 1976, it became very obvious that cost is the paramount interest in Congress. While the technical and schedule sections of the SAR provide valuable management information, there are few, if any, documents that evoke and arouse the emotions of the Congressional and DOD Resource Managers as does the cost section of the SAR.

The environment in which the SAR and Project Manager must function has resulted in this recent focus on cost. The DOD no longer gets the

largest share of the annual budget. In the current Federal budget, over 70% of the dollar expenditures are uncontrollable. Defense shares only 27% of today's budget as compared to approximately 43% of the Federal Budget ten years ago (11). Since considerable Congressional review occurs prior to appropriating money, the SAR has emerged as a primary information tool to transmit the status of major acquisition programs to Congress.

Because the Department of Defense functions in an environment of limited resources, high inflation and other economic uncertainties, escalation rates will continue to vary, compounding cost growth; therefore, the SAR will continue to struggle to present the accurate cost status of a program. At times the SAR may not be totally effective in reflecting cost data; however, I believe the Project Managers will continue to use the best "current estimates" based upon known requirements and the knowledgeable insight of higher authority within DOD. The performance and schedule information have been easy to keep accurate based on milestoneing techniques and other management information systems.

I conclude that the concept of the SAR is sound and should be retained in its present role. Although complex and time consuming to prepare, the SAR contains a wealth of information that reflects a composite of knowledge not found elsewhere in one key document.

RECOMMENDATIONS

The following recommendations are made in an attempt to alleviate problems associated with the SAR and its increasing complexity:

- a. Revision of DOD Instruction 7000.3 for each reporting criteria change rather than submission of memoranda to the Service Secretaries.
- b. Issuance of timely, realistic, appropriate and concise guidance from DOD hierarchy to SAR coordinators in order to expedite SAR submissions within the 30-day timeframe.
- c. Simplify the SAR giving particular attention to the prime user and the limited time he has to analyze it. The financial section, particularly the approach to escalation, requires simplification.
- d. Submittal of supplemental CPR requirement separate from the SAR.
- e. Establishment of a training curriculum for preparation of SARs to provide consistency at both the preparation and review levels.

If these recommendations are implemented, I believe the SAR will become even more valuable in increasing Congressional understanding of the technical and financial aspects of DOD's major defense systems.

IMPLICATIONS

Since the SAR is now Public Law, I predict the SAR will continue to become more prominent as Congress and its Committees expand their base of direct control over the procurement team. One former high DOD official alluded to this fact during a presentation I attended in September 1976. While DOD's people and money resources continue to be cut, Congressional Staff Offices are mushrooming with personnel who

are attempting to become experts in the weapons acquisition field.

Recently, while listening to presentations in both the House and Senate Chambers concerning Defense budgeting, it became obvious that the Staffers are exercising an increasing amount of control.

I predict that changes to the SAR format will continue as Congress strives to increase the amount of information they perceive as required to exercise this control. It is highly probable that in the not too distant future, Operation and Support (O&S) costs may be required for inclusion in the SAR for new major acquisition programs. Another consideration includes the retention of the PE as a static baseline from which changes can be measured and evaluations made.

BIBLIOGRAPHY

1. Department of Defense Instruction 7000.3, Selected Acquisition Reports (SAR), September 23, 1975.
2. Telephone conversations and personal contact with GAO personnel.
3. Interview with the Office of the Secretary of Defense SAR Coordinator, August 1976.
4. Secretary of Defense letter to Senator Stennis, February 9, 1970.
5. Assistant Secretary of Defense (Comptroller) Memorandum for Assistant Secretaries of the Military Departments (FM) and Directors of the Defense Agencies, Major Program Acquisition Cost Estimates, June 30, 1976.
6. Secretary of the Navy Instruction 7700.5C, Selected Acquisition Reports (SAR), April 16, 1976.
7. Comptroller General of the United States, Report to the Congress, OSD Case #3957, March 27, 1975.
8. Public Law 94-106 - Section 811, 94th Congress, H.R. 6674, October 7, 1975.
9. Assistant Secretary of Defense Memorandum for Assistant Secretaries of the Military Departments and Directors of the Defense Agencies, Selected Acquisition Report - Supplemental Contractor Cost Information, August 16, 1976.
10. Naval Air Systems Command Memorandum for the Assistant Secretary of the Navy (FM), Selected Acquisition Reports, October 8, 1976.
11. The United States Budget in Brief, Fiscal Year 1977.

Interviews: Project Managers and Staff Personnel within various Project Offices; SAR Reviewers in the Offices of Chief of Naval Material, Navy Comptroller and Secretary of Defense; GAO SAR Contacts; Congressional Staffers (Senate Armed Services Committee, Senate Budget Committee, House Appropriations Committee).

